Connections between LBVs and Supernovae

Nathan Smith

University of California, Berkeley

I will discuss the properties of LBV eruptions inferred from their circumstellar nebulae and from their light curves in historical examples and extragalactic Eta Carinae analogs. Recent observations of supernovae, especially those of the Type IIn class, suggest that these supernovae undergo precursor outbursts with masses, velocities, kinetic energies, and composition similar to the 1843 egiant eruption of Eta Carinae and non-terminal giant eruptions of other LBVs. This possible connection offers valuable clues to the final pre-SN evolution of massive stars that contradict current paradigms, and it emphasizes that giant LBV eruptions (or events like them) represent a key long-standing mystrery in astrophysics that begs for our attention.